

REMARKS

Claims 34 and 38 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 28 to 34 and 40 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. RE 38,307 (Gustafsson et al.). Claims 35 to 39 were rejected under 35 U.S.C. § 103(a) as obvious over Gustafsson et al. in view of U.S. 6,424,421 (Cremer et al.).

Claims 34, 38 and 40 have been amended. New claim 41 has been added, support for which is found in claim 31 for example.

Reconsideration of the application based on the following is respectfully requested.

Rejection under 35 U.S.C. §112, second paragraph

Claims 34 and 38 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims have been amended to eliminate the objectionable claim language and applicants thank the Examiner for noting these issues.

Withdrawal of the rejections under 35 U.S.C. §112, second paragraph, is respectfully requested.

Rejections under 35 U.S.C. §102

Claims 28 to 34 and 40 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. RE 38,307 (Gustafsson et al.).

Gustafson uses incoherent light from a light source 30 or light source such as a mercury arc lamp (see col. 16, lines 6 to 7). The use of incoherent light is explained in detail in Gustafson at col. 14, line 54 et seq.

Claim 28 recites "an illumination system for illuminating an object for examination with a plurality of coherent light beams through at least one objective lens arrangement, the object having a plurality of object structures, the light beams interfering in at least one object plane and

illuminating the object in the object plane with an interference pattern.”

Such coherent light beams can be for example laser beams (See present specification at page 28, line 5 et seq.). The importance of this coherence is discussed for example in the present specification at page 22, line 11 et seq. for example, and throughout the specification where the wavelengths of the particular coherent light beams are described.

Gustafson on the other hand specifically desires the use of incoherent light (See for example col. 5, lines 33 to 35: “Another object of the invention is to provide a method and apparatus ... which does not require the use of a coherent light source.”)

In fact Gustafson teaches away from the use of coherent light in distinguishing itself from microscopes using lasers. See col. 14, line 54 et seq. Much of Gustafson’s structure and its analysis is devoted to permitting use of this incoherent light. See for example col. 18, lines 1 to 49 and col. 22, line 66 to col. 23, line 4.

Withdrawal of the rejections under 35 U.S.C. §102 is respectfully requested.

With further respect to claim 32, claim 32 recites the wave field microscope as recited in claim 28 wherein the lens arrangement has at least two spatial directions, the lens arrangement having in at least one of the spatial directions a first objective lens with a *first numerical aperture* or a first reflector assigned to a second objective lens with *a second numerical aperture higher than the first numerical aperture*, and, in at least one of the other spatial directions, the lens arrangement has two other objective lenses with other numerical apertures lower than the second numerical aperture, or a third objective lens with a third numerical aperture lower than the second numerical aperture and a second reflector assigned to the third objective lens

None of the numerical aperture limitations have been addressed, and Gustafson does not show these features.

Withdrawal of this rejection is respectfully requested as well.

New claim 41 is believed patentable for the same reason.

Rejections under 35 U.S.C. §103

Claims 35 to 39 were rejected under 35 U.S.C. § 103(a) as obvious over Gustafsson et al.

in view of U.S. 6,424,421 (Cremer et al.).

In view of the fact that Gustafsson seeks to avoid coherent light, withdrawal of these rejections are also respectfully requested.

In addition, it noted that Cremer is 102(e) prior art to the present invention and applicants hereby state that both Cremer and the present invention were assigned at the time of the present invention to the same inventive entity, Ruprecht-Karls-Universitaet Heidelberg. The present assignment is found at Reel/Frame 010925/0488. See MPEP 706.02(1)(2).

Withdrawal of the rejections under 35 U.S.C. §103 is respectfully requested.

CONCLUSION

It is respectfully submitted that the application is now in condition for allowance and applicants respectfully request such action.

Respectfully Submitted,

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